Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-13. (Canceled)

14. (Currently Amended) A method for forming an electrode material made of substituted lithium nickel-manganese oxides, comprising the steps of:
producing compositions of $Li_{1+x}Ni_{\alpha}Mn_{\beta}A_{\gamma}O_2$ wherein A is chosen from the group consisting of Mg, Zn, Al, Co, Ga, B, Zr, and Ti, and further wherein x is between about 0 and 0.2, α is between about 0.1 and 0.5, β between about 0.4 and 0.6, and γ between about 0 and about 0.1 through a electrode forming process chosen from the group consisting of a solid-state reaction method, an aqueous solution method, and a sol-gel method;

further wherein the solid-state reaction method comprises the steps of:

mixing amounts of lithium hydroxide (or lithium carbonate), (Ni,Mn)-hydroxide, and A-hydroxide or A oxide (wherein A is chosen from the group consisting of Mg, Zn, Al, Co, Ga, B, Zr, and Ti) in acetone using zirconia balls for about 12-24 hours to form a mixed powder;

calcining the mixed powder at about 450~550°C for about 12-30 hours in air;

calcining the mixed powder at about 900-1100°C for about 10-24 hours either in an air or an nitrogen/oxygen atmosphere; and

rapidly quenching the calcined powders into liquid nitrogen.

15.-20 (Canceled)

21. (New) The method of claim 14, wherein x is between about 0 and 0.2, α is between about 0.2 and 0.5, and β is between about 0.5 and 0.6.

22. (New) The method of claim 14, wherein A is Mg and further wherein x is between about 0 and 0.2, α is between about 0.1 and 0.5, β between about 0.4 and 0.6, and γ is between about 0.01 and about 0.1.

23. (New) The method of claim 14, wherein A is Al and further wherein x is between about 0 and 0.2, α is between about 0.15 and 0.5, β is between about 0.45 and 0.6, and γ is between about 0.01 and about 0.1.

24. (New) The method of claim 14, wherein A is Co and further wherein x is between about 0 and 0.2, α is between about 0.15 and 0.5, β is between about 0.45 and 0.6, and γ is between about 0.01 and about 0.1.

25. (New) The method of claim 14, wherein A is Ti and further wherein x is between about 0 and 0.2, α is between about 0.2 and 0.5, the β is between about 0.4 and 0.6, and γ is between about 0.01 and about 0.1.

26. (New) An electronic device comprising an electrode comprised of the electrode material produced by the method of claim 14 and wherein the electrode is a cathode comprising a mixture of about 80 weight percent of the electrode material, about 10 weight percent carbon, and about 10 weight percent polyvinylidene difluoride as a binder.

27. (New) A method for forming an electrode material made of substituted lithium nickel-manganese oxides, comprising the steps of:
producing compositions of $Li_{1+x}Ni_{\alpha}Mn_{\beta}A_{\gamma}O_2$ wherein A is chosen from the group consisting of Mg, Zn, Al, Co, Ga, B, Zr, and Ti, and further wherein x is between about 0 and 0.2, α is between about 0.1 and 0.5, β between about 0.4 and 0.6, and γ between about 0 and about 0.1 through a electrode forming process chosen from the group consisting of a solid-state reaction method, an aqueous solution method, and a sol-gel method;

further wherein the aqueous solution method comprises the steps of:

dissolving appropriate amounts of lithium hydroxide, nickel hydroxide, and A-hydroxide or A-nitrate (wherein A is chosen from the group consisting of Mg, Zn, Al, Co, and Ga) in water;

adding an aqueous solution of manganese acetate to form a mixed solution;

refluxing the mixed solution in a round bottom flask attached with a condenser at about 80°C for about 12-24 hours;

evaporating the mixed solution in a rotary vacuum evaporator;

eliminating the organic contents in the mixed solution at about 400°C for about 2 hours;

calcining the resulting powder at about 900-1100°C for about 10-24 hours in either an air or an nitrogen/oxygen atmosphere; and

rapidly quenching the calcined powders into liquid nitrogen.

28. (New) The method of claim 27, wherein x is between about 0 and 0.2, α is between about 0.2 and 0.5, and β is between about 0.5 and 0.6.

29. (New) The method of claim 27, wherein A is Mg and further wherein x is between about 0 and 0.2, α is between about 0.1 and 0.5, β between about 0.4 and 0.6, and γ is between about 0.01 and about 0.1.

30. (New) The method of claim 27, wherein A is Al and further wherein x is between about 0 and 0.2, α is between about 0.15 and 0.5, β is between about 0.45 and 0.6, and γ is between about 0.01 and about 0.1.

31. (New) The method of claim 27, wherein A is Co and further wherein x is between about 0 and 0.2, α is between about 0.15 and 0.5, β is between about 0.45 and 0.6, and γ is between about 0.01 and about 0.1.

32. (New) The method of claim 27, wherein A is Ti and further wherein x is between about 0 and 0.2, α is between about 0.2 and 0.5, the β is between about 0.4 and 0.6, and γ is between about 0.01 and about 0.1.

33. (New) An electronic device comprising an electrode comprised of the electrode material produced by the method of claim 27 and wherein the electrode is a cathode comprising a mixture of about 80 weight percent of the electrode material, about 10 weight percent carbon, and about 10 weight percent polyvinylidene difluoride as a binder.

34. (New) A method for forming an electrode material made of substituted lithium nickel-manganese oxides, comprising the steps of:
producing compositions of $Li_{1+x}Ni_{\alpha}Mn_{\beta}A_{\gamma}O_2$ wherein A is chosen from the group consisting of Mg, Zn, Al, Co, Ga, B, Zr, and Ti, and further wherein x is between about 0 and 0.2, α is between about 0.1 and 0.5, β between about 0.4 and 0.6, and γ between about 0 and about 0.1 through a electrode forming process chosen from the group consisting of a solid-state reaction method, an aqueous solution method, and a sol-gel method;

further wherein the sol-gel method comprises the steps of:

dissolving appropriate amounts of lithium acetate, nickel acetate, manganese acetate, A-acetate or A-nitrate; (wherein A is chosen from the group consisting of Mg, Zn, Al, Co, and Ga) in water;

adding a glycolic/tartaric acid solution for use as a chelating agent;

adjusting the pH of the resulting solution to about 7 to about 8 using ammonium hydroxide;

continuously stirring and heating the solution on a hot plate to form a gel precursor;

decomposing the gel precursor at 450°C about for about 5h in air to form a decomposed powder;

calcining the decomposed powders at about 900-1100°C for about 10-24 hours in either an air or an nitrogen/oxygen atmosphere; and

rapidly quenching the calcined powders into liquid nitrogen.

35. (New) The method of claim 34, wherein x is between about 0 and 0.2, α is between about 0.2 and 0.5, and β is between about 0.5 and 0.6.

36. (New) The method of claim 34, wherein A is Mg and further wherein x is between about 0 and 0.2, α is between about 0.1 and 0.5, β between about 0.4 and 0.6, and γ is between about 0.01 and about 0.1.

37. (New) The method of claim 34, wherein A is Al and further wherein x is between about 0 and 0.2, α is between about 0.15 and 0.5, β is between about 0.45 and 0.6, and γ is between about 0.01 and about 0.1.

38. (New) The method of claim 34, wherein A is Co and further wherein x is between about 0 and 0.2, α is between about 0.15 and 0.5, β is between about 0.45 and 0.6, and γ is between about 0.01 and about 0.1.

39. (New) The method of claim 34, wherein A is Ti and further wherein x is between about 0 and 0.2, α is between about 0.2 and 0.5, the β is between about 0.4 and 0.6, and γ is between about 0.01 and about 0.1.

40. (New) An electronic device comprising an electrode comprised of the electrode material produced by the method of claim 34 and wherein the electrode is a cathode comprising a mixture of about 80 weight percent of the electrode material, about 10 weight percent carbon, and about 10 weight percent polyvinylidene difluoride as a binder.